

**Response to Comments**  
**WWDR “Tier 2” Monitoring and Reporting Program**  
**May 8, 2008 Meetings**

**Residents**

A number of revisions were made to the MRP as a result of our discussions that improved the clarity of the document. Not all of those changes are detailed here. Rather, we respond here to specific points of process and content brought out in the discussions.

1. Supplemental ECP for each Tier 2 unit enrollment, including appurtenant roads.

*The revised MRP contains specific language regarding this issue (B.3., page 3). ECPs will be revised, and a cover sheet will be prepared that explains which ECP sites will be addressed, including appurtenant roads.*

2. Appurtenant roads should be included in the landslide inspections and in defining a Tier 2 landslide (a landslide on a Tier 2 appurtenant road is a Tier 2 landslide).

*The landslide model is based on open-slope landslides, away from roads. Dealing with appurtenant roads in Tier 2 is problematic because roads can be used for many different units, such as those logged under the landslide limits. Language was added to the revised MRP requiring notification of a road-related landslide (A.1.b., page 3), and a landslide from an appurtenant road will be investigated as to causative factors and remedial actions (see 11, below).*

3. Landslide model allows discharge of 125% of background, but any logging beyond that limit, even if zero landslide sediment, will produce additional sediment beyond the 125% from roads, skid trails, and the like.

*The 125% of background applies only to harvest-related landslide delivery, not to other sediment sources. Additional sediment from units enrolled under this MRP is addressed by other mechanisms already identified in the WWDR, including Cleanup and Abatement orders and the HCP. The permit was designed to address certain specific discharges.” The landslide model and the resultant effluent limitations IV. B. 1. and 2. in the WWDRs refer only to sediment from harvest-related landsliding: “The receiving water limitation for sediment discharges from harvest-related landsliding is 25% above background. Sediment discharges from harvest-related landsliding are predicted using the Empirical Harvest-Related Landslide Sediment Delivery Reduction Model...”*

4. Repetitive entry includes additional impacts from roads, ground disturbance, and disrupted hydrology.

*The Discharger is required to submit a plan for each year’s harvest, which we evaluate on a spatial and temporal basis to minimize the potential for cumulative effects from multiple entries. Also, the road upgrading and surfacing required under the HCP reduces impacts from roads.*

5. There should be more application of engineering and geologic principles in the design and evaluation of THPs, including quantifiable measures, such as pore pressures, slope, saturation, soil depth, and others.

*While geologic and engineering principles are used in the design and evaluation of Tier 2 units, we understand that you would like to see more quantitative measurements applied to the process. Measurement of such criteria is an expensive and time-consuming process. While our agency believes there is a role for geotechnical techniques in timber harvesting, to our knowledge such techniques have not been applied in THP development in the state.*

6. Identify zero landslide hazard areas.

*The MRP required by the WWDRs is a monitoring and reporting program to determine if a landslide has occurred as a result of a zero harvest-related landslide THP. As the comments suggest, there is scientific uncertainty in predicting where and when harvest-related landslides occur. Attempting to map an entire zero-landslide area at this time is not a feasible, desirable, or particularly useful exercise.”*

7. No winter operations.

*In staffs’ experience, winter operations tend to be minimized as a result of the rigorous Tier 2 case-by-case analysis. For example, ten of the sixteen units slated for submission this year have no winter operations. Of the other six, three will most likely be done long prior to the next winter period. Winter operations do not necessarily have a higher risk of landsliding than summertime operations, as slope failure from removal of trees commonly takes place in years following tree removal. Standard limitations on winter logging (which is not restricted by the WWDRs) will apply.*

8. Make maps available in the public process.

*Maps will be posted on our website for fourteen days, and also available for review in our office.*

9. Landslide monitoring should go out for 15 years, since that is the time base used for the landslide model.

*Under the current MRP and WWDRs, monitoring will continue for 15 years.*

10. The rainfall triggers should be reduced to a 1-inch storm after 5 inches of cumulative rainfall (cut in half), or at least looked at in terms of soil saturation, soil depth, etc. Discussion of how much rainfall to cause flooding was included in this, primarily in the context of bank slumps.

*The rainfall triggers are based on empirical data, and appear to be the size of storm that can initiate landsliding. It should not be tied to flooding, as the triggering events are different for the two mechanisms. However, at the May 8, 2008 meeting it was suggested that any reduction in the triggers (lower accumulated rainfall and lower intensity) should be evaluated in terms of the actual return intervals for the area. We have been presented no information to that effect, but will reevaluate the triggers if we may consider a reevaluation of triggering events if new information becomes available that suggests that the current triggers are ineffective.*

11. Consider stopping all timber operations when a landslide occurs.

*All operations on Tier 2 units will cease if a landslide occurs on or downslope of a Tier 2 unit (D.3., page 4). The Executive Officer has numerous options: total cessation; halting felling while allowing yarding, or hauling, or some combination. In any case, no further Tier 2 felling will occur until an investigation determines what role Tier 2 logging may*

*have played in the landsliding and remedial actions and/or modifications to enrolled units are addressed.*

*Also, note that language was added under D.3. requiring notification of a landslide within 48 hours of discovery, and that language was added to H.2., page 7, as requested, that no further enrollments under Tier 2 would occur "...pending completion of the investigation."*

12. Make the review document an appendix.

*It is now Appendix A.*

13. There is some confusion about Erosion Control Plans—how they are constructed, reviewed, revised.

*We direct the public to the Order No. R1-2004-0030 and accompanying guidance documents on our website at:*

[http://www.waterboards.ca.gov/northcoast/publications\\_and\\_forms/available\\_documents/timber\\_waiver/](http://www.waterboards.ca.gov/northcoast/publications_and_forms/available_documents/timber_waiver/)

14. Reduce acreages allowed under the zero landslide discharge provision if a landslide occurs.

*We see no logical way to make a determination as to a reasonable reduction in harvest acres tied to the occurrence of a landslide, and the MRP is not the legal mechanism to do that. However, the occurrence of a landslide on Tier 2 areas will cause an evaluation whether the landslide was caused by Tier 2 activities. If so, then the entire Tier 2 enrollment process will be closely reviewed and terminated if appropriate.*

15. Revise objective 1.a. to comport with the WWDRs discharge limitation IV.B.3. regarding MRP to prove there is no discharge.

*We changed the language in the revised MRP, objective 1.a., page 3.*

16. Clarify that Regional Board staff should participate in field inspections for landslides, and that the monitoring is required on a yearly basis.

*Language was added to Item D, page 4, clarifying yearly inspections and that Regional Board staff can participate in the inspections.*

## **Humboldt Watershed Council, Letter dated May 7, 2008**

1. Please provide peer-reviewed science that supports the "Tier 2" concept.

*No peer review was required, or performed, for this effluent limitation. No peer-review is required of the MRP or the underlying WWDR. (See Health and Safety Code, section 57004 [requiring peer review of a policy that has the effect of a regulation]).*

2. Please explain how that science outweighs the overwhelming record for the WWDR. Please explain how these two completely contrary permitting structures can coexist [timber harvest under the landslide model limitations and timber harvest under zero harvest-related landslide sediment limitation].

*This argument is that the terms of the WWDRs are invalid because they deviated from the Regional Water Board's adoption motion. The commenter participated extensively in this matter as a designated party at the May 8, 2006, meeting at which the Board considered the revision to allow Tier 2 acres and heard the adoption motion read into the record. Copies of the unofficial transcript of that motion together with the adopted WWDRs were also emailed to this commenter on May 12, 2006. However, a timely petition was not submitted. Therefore, this argument becomes a collateral challenge to the WWDRs, under the guise of a comment on the MRP.*

3. The MRP requires 'best professional judgment' as to the likelihood of future landsliding. The sign-off statement asks for nothing other than "that degree of care and skill ordinarily exercised" by engineering geologists. That same degree of care and skill has been required on every other THP that has ever been reviewed by a geologist or engineer, and has failed to anticipate and prevent numerous landslides in the past. Please explain how that degree can logically be counted on to prevent landsliding in this instance.

*Although that standard may apply to all forestry geology work, it has never been this explicitly stated. We disagree with the statement regarding the degree of care and skill: the standard of review and analysis for Tier 2 units is above and beyond standard THP review. By signing off on a THP unit that undergoes a more rigorous preparation and review method than a standard THP, the statement carries more weight as well.*

*Furthermore, the MRP as required by the WWDRs is a monitoring and reporting program to determine if a landslide has occurred as a result of a zero harvest-related landslide THP. Enrollment of THP units under Tier 2 is on a case-by-case basis.*

4. The statement "the WWDR's do allow the discharger to exceed that rate... provided that there is zero discharge of sediment from harvest related landslides" is misleading in that it gives the mistaken impression that the permit can somehow ensure the prevention of landsliding. There should be no pretense that post-harvest monitoring can in any way prevent landsliding.

*Please see response to #3 above. As stated already, the MRP required by the WWDRs is a monitoring and reporting program to determine if a landslide has occurred as a result of a zero harvest-related landslide THP, not a landslide prevention program.*

5. For clarity and accuracy sake, the sentence quoted in #4 above, should read "a monitoring program to find out after the fact whether any such discharge has occurred."  
*We changed the language in the revised MRP, objective 1.a., page 3.*
6. We previously raised the concern that the Tier 2 program is based on the assumption that there are certain "zero hazard risk" areas in the watersheds, and yet no definition or mapping for these areas exists.

*We disagree that the zero harvest-related landslide discharge limitation was based on zero-risk areas. The zero harvest-related landslide discharge limitation is a challenge to the Discharger to develop a process to craft THPs with zero landslide discharge. Furthermore, the direction in the effluent limitation IV.B.3. regarding the MRP is to develop a monitoring and reporting program to determine if a landslide has occurred.*

7. Please provide a detailed scientific description of the Zero Hazard areas; the mapping of all such areas in these watersheds; and, if any of these areas have previously been

mapped as anything other than zero hazard, please explain what physical or geologic changes have happened which have removed any potential risk from these areas.

*We are unaware of such information.*

8. Our March 5, 2007 comments, in which we made the following specific requests.

- No ground-based equipment or dragging of logs on slopes over 40% (as per statement in Landslide Sediment Model)
- No harvesting at all on slopes over 70%.
- 100' inviolable no-harvest setbacks on all streams.
- No activities of any kind within 100' of any unstable areas, dormant or not.
- No use of non-armored roads by any equipment at any time of year.
- No winter ops of any kind.

*As was discussed numerous times, including the May 8, 2008 meeting, the specific conditions in the first six bullets are not appropriate in a monitoring and reporting program, and would require changes to the WWDR. The risk in having prescriptive requirements is in the limiting of options; our preference is to allow the discharger the opportunity to propose specific harvesting and yarding methods for our case-by-case review. Staff will consider the suggested criteria in that process.*

- All CAOs must absolutely be in full compliance.

*The Regional Board explicitly deleted portions of the proposed permit that would require CAO compliance before new timber harvest activity could occur under the WWDR. That said, as of this writing, the discharger is largely in compliance with the CAO.*

- Staff must certify their “best professional judgment,” and must be professionally responsible for any landsliding, surface erosion, or sediment delivery which results, directly or indirectly, from any operations related to these activities.

*Staff complies with the Business and Professions Code, section 7800 et seq. (Geologist and Geophysicist Act).*

- Staff must demonstrate how their “best professional judgment” is superior to the entire scientific record.

*Staff believes that implementation of the Tier 2 Program and the MRP, including the most current revisions, are consistent with the entire record.*

- The scientific concepts underlying this “Tier 2” program (if any) must be fully peer-reviewed prior to any additional enrollments. Most specifically, this review must address the absolute and fundamental inconsistency between the WWDR and this “Tier 2” program.

*No peer-review is required of the MRP or the underlying WWDR. (See Health and Safety Code, section 57004 [requiring peer review of a policy that has the effect of a regulation].)*

## Scotia Pacific / Pacific Lumber

1. Palco is seeking scheduling certainty so that they can keep their contractors busy, and ensure that contractors will continue to work for them.

*This is a reasonable request, and we have your proposed schedule to that effect. We are supportive of working from that schedule where possible, because it also spreads out our workload and the public involvement and provides an opportunity to plan workload.*

2. Palco would like to enroll enough Tier 2 plans to reach the peak flow limit.

*While the WWDRs allow this, it is dependent on a number of factors, such as the types of Tier 2 plans submitted (those requiring less avoidance of landsliding factors are preferred) and the distribution of timber harvest in the watersheds over time and space.*

3. Some possible scenarios in the future: enroll plans the previous year; in some cases, fell trees but let them stay on the ground until the next year.

*We can enroll plans well ahead of scheduled harvesting, but wish to avoid an end of the year "crush" of reviews and enrollments. We will explore legal options that are enrolled for a future year. Felling trees on enrollments for one year prior to that year would not be allowed, if the enrolled acres in the year in which the trees are to be felled are already at the peak flow limitation*

4. The company would be willing to hold public meetings to review submittals.

*We would welcome such meetings, and have extended your offer to the residents and Humboldt Watershed Council, although we would not be involved.*